Requirements For
Commercial Cooking Equipment

Removal of smoke and grease-laden vapors from commercial cooking equipment must comply with NFPA 96 **Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations**, 2014 Edition, in accordance with Division B, Articles 3.3.1.2., 6.3.1.6., and 9.10.1.4. of the 2024 Ontario Building Code. Cooking equipment that has been listed in accordance with ANSI/UL 197 or an equivalent standard for reduced emissions shall not be required to be provided with an exhaust system.

Alteration, Replacement, or Relocation

- Notification in writing shall be given of any alteration, replacement, or relocation of any exhaust or extinguishing system or part thereof of cooking equipment.

Commissioning of New NFPA 96 Systems

- Contact Fire Inspector for kitchen exhaust hood rough-in inspection. Do not wrap ducts until a smoke test has been witnessed by a Fire Inspector.
- If ducts are wrapped prior to completion of smoke test the wrap will need to be removed to ensure proper testing.
- Balloon test will be required with Fire Inspector present.

Hoods

- Hoods or that portion of a primary collection means designed for collecting cooking vapors and residues shall be constructed of and be supported by steel not less than 1.21 mm (No. 18 MSG) in thickness, stainless steel not less than 0.91 mm (No. 20 MSG) in thickness, or other approved material of equivalent strength and fire and corrosion resistance.
- Clearance of hoods, grease removal devices, exhaust fans and ducts to combustible material shall be at least 457 mm (18 in). Exceptions in clearance may be permitted for listed equipment.
- Seams and joints of hoods and ducts must have a liquid-tight continuous external weld.
- Outside make-up air duct into hood requires a listed fire-actuated damper.

Duct Systems

- Ducts shall be constructed of and supported by carbon steel not less than 1.52 mm (No. 16 MSG) in thickness or stainless steel not less than 1.21 mm (No. 18 MSG) in thickness.
- Ducts must be installed without forming dips or traps, except cleanout traps.
- Ducts shall have openings for inspection and cleaning purposes at any change of direction.
- Duct access panels shall be of the same material and construction as ducts.
- Covered openings are permitted for access to listed fire protection system devices.
- Each duct system shall constitute an individual system serving only exhaust hoods in one fire zone on one floor and shall not be interconnected with any other building ventilating or exhaust system.
- Ducts shall not pass through fire walls.
- Dampers shall not be installed in duct systems unless specifically listed for such uses.
- Vertical ducts penetrating roof or floor fire separations shall be enclosed in a continuous noncombustible enclosure extending from the ceiling above the hood to or through the roof, so as to maintain the integrity of the fire separations required by the Ontario Building Code, but in no case shall have a fire resistance rating of less than 1-hour in buildings less than four storeys in height, or 2-hours in buildings four storeys or more in height. (See NFPA 96 Clause 7.7.1.5 for exceptions).
- Clearance from the duct to the interior surfaces of noncombustible or limited-combustible enclosures shall not be less than 152 mm (6 in.).
- Access doors to shafts must be listed fire doors, installed in accordance with NFPA 80.
- Ducts should lead as directly as possible to the exterior of the building and shall discharge at least 1.02 m (40 in.) above the roof surface and have a minimum of 3.05 m (10 ft.) clearance from the adjacent buildings, property lines, air intakes and adjoining grade levels.
- Where the required horizontal separation is not feasible, air intake must be at least 920 mm (3 ft.) below the exhaust outlet directed away from the intake.
- Exhaust air discharge must be directed up and away from roof surface.

Grease Removal Devices

- Listed grease filters, baffles or other grease removal devices, exhaust fans and auxiliary equipment shall be listed and installed to comply with Chapters 6, 8 and 9 of NFPA standard 96.

- Grease removal devices shall be protected from direct flames and high temperatures.

Airflow Requirements

- Air velocity through any duct shall be not less than 152.4 m/min (500 ft/min).
- Data on air movement or performance shall be made available.
- Replacement air is required where pressure may be less than 4.98 kPa (0.02 in. w.c.).

Electrical Equipment

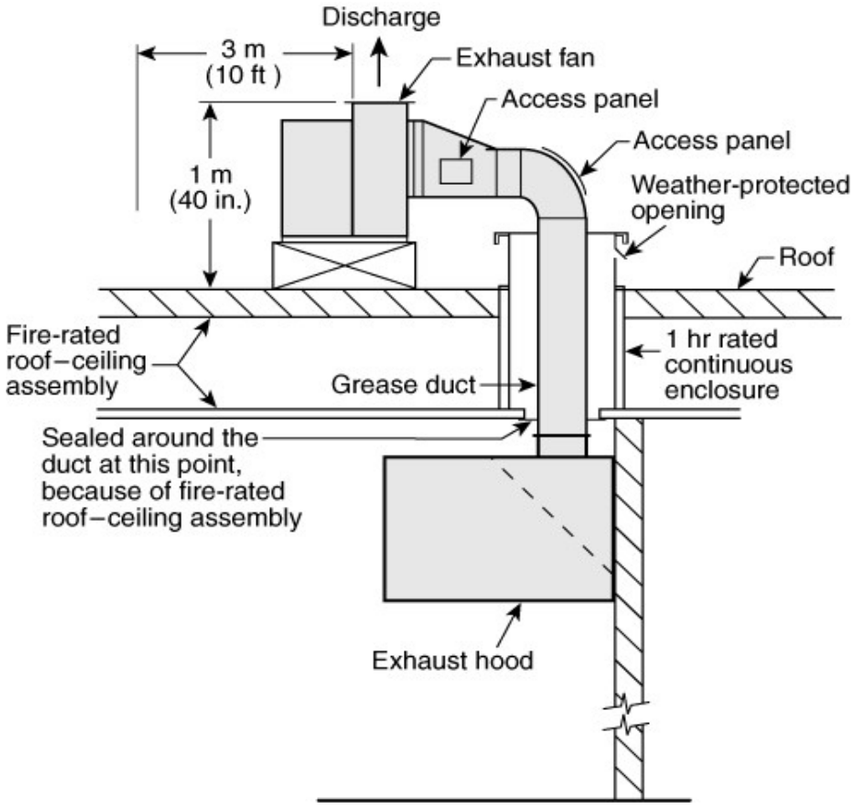
- All electrical equipment must be installed in accordance with NFPA 70, National Electrical Code with due regard to the effects of heat, vapour and grease on the equipment.
- Kitchen hood exhaust fan shall activate when any appliance under the hood is turned on.

Fire Extinguishing Equipment

- Approved fire extinguishing equipment shall be provided for the protection of duct system, grease removal devices and hood in the kitchen area.
- Approved fire extinguishing systems shall be installed in accordance with the terms of their listing, manufacturer's instructions, and applicable NFPA standards.
- The operation of any extinguishing system shall automatically shut off all sources of fuel and electrical power that produce heat to all equipment requiring protection.
- Extinguishing systems shall be connected to a fire alarm system serving the area wherein the extinguishing systems are located, where such alarm system is present. Electrically powered extinguishing systems shall be monitored by a supervisory alarm signaling power failure.
- Fire extinguishing systems shall be inspected and approved by the Oshawa Fire Services prior to the occupancy of the building.

Maintenance and Inspection

- Maintenance and periodic inspections of equipment shall be carried out to comply with NFPA standards. Certificates of inspection and maintenance shall be forwarded, if required, to the Oshawa Fire Services.



NFPA 96

4.2 **Clearance** (See Figures A.4.2.(a) through (g) of NFPA 96)

4.2.1 Where enclosures are not required, hoods, grease removal devices, exhaust fans, and ducts shall have a clearance of at least 457 mm (18 in.) to combustible material, 76 mm (3 in.) to limited-combustible material, and 0 mm (0 in) to noncombustible material.

4.2.2 Where a hood, duct, or grease removal device is listed for clearances less than those required in 4.2.1 the listing requirements shall be permitted.

4.2.3 Clearance Reduction

4.2.3.1 Where a clearance reduction system consisting of 0.33 mm (0.013 in.) (28-gauge) sheet metal spaced out 25 mm (1 in.) on noncombustible spacers is provided there shall be a minimum of 229 mm (9 in.) clearance to combustible material.

4.2.3.2 Where a clearance reduction system consisting of 0.69 mm (0.027 in.) (22-gauge) sheet metal on 25 mm (1 in.) mineral wool batts, or ceramic fiber blanket reinforced with wire mesh or equivalent spaced 25 mm (1 in.) on noncombustible spacers is provided, there shall be a minimum of 76 mm (3 in.) clearance to combustible material.

4.2.3.3 Where a clearance reduction system consisting of a listed and labeled field-applied grease duct enclosure material, system, product, or method of construction specifically evaluated for such purpose in accordance with ASTM E 2336, the required clearance shall be in accordance with the listing.

4.2.3.4 Zero clearance to limited-combustible materials shall be permitted where protected by metal lath and plaster, ceramic tile, quarry tile, other noncombustible materials or assembly of noncombustible materials, or other materials and products that are listed for the purpose of reducing clearance.